

December 28, 2011

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATION
DEPARTMENT OF TRANSPORTATION
RHODE ISLAND CONTRACT NO.2011-CL-057
FEDERAL-AID PROJECT NO. FAP Nos: 405-421-610

I-95 Gateway Maintenance Contract 2011-2012

From P&W RR Bridge to Route 10
CITY/TOWN OF Cranston
COUNTY OF PROVIDENCE

NOTICE TO PROSPECTIVE BIDDERS

ADDENDUM NO. 1 Prospective bidders and all concerned are hereby notified of the following changes in the Plans, Specifications, Proposal and Distribution of Quantities for this contract. These changes shall be incorporated in the Plans, Specifications, Proposal and Distribution of Quantities, and shall become an integral part of the Contract Documents.

A. Contract Documents

1. SPECIFICATIONS - JOB SPECIFIC

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a. JS-3 and JS-4

Delete Pages JS-3 and JS-4 in their entirety and replace them with pages JS-3(R-1), JS-4(R-1), JS-4a(R-1), JS-4b(R-1) and JS-4c(R-1) attached to this Addendum No. 1. The "Materials", "Construction Methods", "Method of Measurement", and "Basis of Payment" sections have changed.


RI Department of Transportation
Chief Engineer

JOB SPECIFIC
R.I. CONTRACT NO. 2011-CL-057

911.9901
REPAIR OF RETAINING WALLS

Description: This Item is for the repair of retaining walls at I-95 Gateway. This work will include furnishing all material and labor necessary to repair the existing modular retaining walls and the immediate surrounding areas to their original condition as directed by the Engineer. The walls were installed under R.I. Contracts No. 9745 (I-95 Gateway Contract 1), 2001-CL-004 (I-95 Gateway Contract 2), and 2004-CL-002 (I-95 Gateway Project Contract 3).

Materials: Additional materials including, but not limited to, the following, may be needed depending on the level of damage:

A. Modular Concrete Wall Units

1. All modular concrete wall units and cap units shall be from the Straight Faced Diamond Retaining Wall System manufactured by Anchor Wall Systems, Inc., 5959 Baker Road, Suite 390, Minnetonka, MN 55345-5996.
2. Color shall be Brown and match the existing wall color.
3. There shall be no approved equal. The Anchor Wall Systems' Straight Faced Diamond Retaining Wall System has been specified in order to ensure uniformity with the existing walls. Samples shall be submitted both to the Engineer and to the Landscape Architecture Unit for approval prior to the placement in order to confirm color similarity with the existing walls.
4. Existing wall material that is in serviceable condition may be re-used at the direction of the Engineer.
5. All concrete wall units shall be sound and free of cracks or other defects that would interfere with the proper placing of the unit or significantly impair the strength of the construction. Cracking or excessive chipping may be grounds for the rejection. Units showing cracks larger than ½ inch when measured along their length shall not be used within the wall. Units showing chips visible at a distance of 30 feet from the wall shall not be used within the wall.

B. Filter Stone

1. Filter Stone is drainage material within and surrounding the wall system which ensures that water is removed, avoiding build-up of water.
2. Filter Stone shall conform to the gradation requirements of Subsection M.01.09, Table 1, Column V of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.

C. Leveling Pad

1. The leveling pad is compacted, well graded aggregate on a biaxial geogrid which provides a stiff, but relatively flexible, layer to distribute the weight of the wall face and a working surface during construction.

2. Aggregate for the leveling pad shall conform to the requirements of Section 304, Select Leveling and Filler Aggregate, Subsection 304.02 Materials of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.
3. The 36 inch wide base geogrid supporting the leveling pad shall be a biaxial geogrid such as Tensar BX1100 as manufactured by the Tensar Corporation, 1210 Citizens Parkway, Marrow, Georgia, or an approved equivalent.

D. Backfill

1. Reinforced backfill is compacted structural fill that surrounds the horizontal layers of geosynthetic reinforcement. The reinforced backfill is placed behind the filter stone and extends to the back of the geosynthetic reinforcement.
2. Common backfill is soil placed behind the reinforced backfill and in front of the mechanically stabilized earth wall.
3. Reinforced and common backfill shall be free of debris with a 3 inch maximum particle size and shall otherwise meet the gradation requirements for gravel borrow in Subsection M.01.09, Table I Column 1a of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.

E. Geosynthetic Soil Reinforcement

1. Geosynthetic Soil Reinforcement is a high tensile strength geogrid or geotextile specifically fabricated for soil reinforcement. The horizontal layers of geosynthetic reinforcement provide tensile strength to hold soil together so that it behaves as a coherent mass.
2. Geogrids consist of high strength durable synthetic grids made of high density polyethylene, polyester, or other approved synthetic material, manufactured specifically for reinforcement of soil. The allowable tensile strength shall be the allowable long-term geosynthetic design tensile strength (T_a) as determined by the National Concrete Masonry Association (NCMA) Method A, as set forth in NCMA's Design Manual for Segmental Retaining Walls. A minimum of T_a of 1,000 pounds per linear foot is required.
3. Certification – prior to purchasing and/or installation, the Contractor must send the following to the Engineer for approval.
 - a. A certificate from the manufacturer attesting to compliance with the specifications as well as the appropriateness of their product with the intended use as detailed in the contract drawings.
 - b. The manufacturer's specifications.
 - c. The ultimate material tensile strength reduction factors as supplied by the manufacturer, with supporting test data, as indicated below, based on a minimum 75 year service life.

Parameter	Required Supporting Test Data
Ultimate Tensile Strength	ASTM D4595 or GRI GGI (minimum average roll width, MARV)
Creep	ASTM D 5262
Site Damage & Durability	GRI GG4
Pullout	GRI GG5 or GRI GG6
Connection Strength	NCMA SRWU 1

d. The following minimum values are required:

Material Reduction Factors	Minimum Values of Reduction Factors
Creep	1.40
Chemical Degradation	1.10
Biological Degradation	1.00
Construction Site Damage	1.05
Material Uncertainty	1.50

F. Drain Pipe

1. Smooth Interior Perforated Corrugated Polyethylene Drainage Pipe – Drainage pipe placed behind and running approximately parallel to the mechanically stabilized earth wall shall be a 4 inch smooth interior, perforated corrugated polyethylene drainage pipe meeting the requirements of Subsection M.04.01.11 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.
2. Fittings – Pipe joints, fittings, bends, etc, shall be constructed of the same material classification as the pipe.
3. Smooth interior Corrugated Polyethylene Lateral Drainage Pipe – Non-perforated pipe transporting water from the mechanically stabilized earth wall to existing drainage structures shall be a 4 inch smooth interior corrugated polyethylene drainage pipe conforming to the requirements of the American Association of State Highway and Transportation Officials (AASHTO) M252. Bedding for this pipe shall be Class B bedding consisting of Gravel Borrow that conforms to the applicable requirements of Subsection M.01.04 of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.
4. Certification – Prior to purchasing and/or installation, the Contractor must send the following to the Engineer for approval:
 - a. A certificate from the manufacturer attesting compliance with these specifications.
 - b. The manufacturer's product data and specifications for pipe and fittings.
 - c. Samples of pipe material to be used.

G. Filter Fabric

1. Filter fabric shall consist of a non-woven drainage filter fabric placed both around the filter stone and between the reinforced backfill and common (retained) backfill.
2. The filter fabric shall be on the Rhode Island Department of Transportation Approved Product List and have the following properties:

AOS	ASTM D 4751	70-100
Grab Tensile	ASTM D 4632	100 lb.
Trap Tear	ASTM D 4533	40 lb.
Water Flow Rate	ASTM D 4491	75 gpm/ft ²
Puncture	ASTM D 4833	40 lb.

3. Seams – based upon the Fabric, the Contractor shall obtain, from the manufacturer and shall furnish to the Engineer, the general placement requirements, seam and overlap requirements, placement procedures and repair procedures. The Contractor shall follow all manufacturers' guidelines to ensure satisfactory performance.
4. The Contractor shall provide a permanent seal around any pipe which will pass through the filter fabric.

H. Adhesive

Adhesive for cap installation shall be of the type recommended by the Modular Concrete Wall Units' manufacturer.

I. Plantable Soil

Plantable soil shall be clean and free of any undesirable material and conform to the applicable requirements of Section M.18 Landscaping Materials of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.

J. Mulch

Mulch shall be clean and free of any undesirable material and conform to the applicable requirements of Section M.18 Landscaping Materials of the Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction, 2004 edition.

Construction Methods: The Contractor shall repair the existing Retaining Wall as directed by the Engineer. All construction repair methods shall be approved by the Engineer prior to performing repair work.

Additional areas of undamaged wall may need to be disassembled and reassembled in order to facilitate repair of damaged sections.

The Contractor will also supply all necessary mobilization, traffic protection, maintenance and movement of traffic protection devices, and cleaning and sweeping pavement as part of this item.

Method of Measurement: “Repair of Retaining Walls” will be measured by the number of “SQUARE FOOT” of wall face repaired inclusive of undamaged sections that are disassembled and reassembled, complete and accepted by the Engineer.

Basis of Payment: “Repair of Retaining Walls” will be paid for at the contract unit price per “SQUARE FOOT”. Said price and payment shall constitute full and complete compensation for all labor, materials, and equipment to repair all the modular concrete walls in the project area to their original condition, mobilization, traffic protection, maintenance and movement of traffic protection devices, and cleaning and sweeping pavement, and all other incidentals necessary to complete this item of work, complete in place and accepted by the Engineer.

END OF SECTION